

D cket Number: 251 US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Olson et al

Group No.: Unknown

Internatioanl Application No: PCT/US96/16934

Examiner: Unknown

International Filing Date: 23 October 1996

ATTN: EO/US

Priority Date: 23 October 1995

For: Hemoglobin Mutants That Reduce  
Heme Loss

CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that this Transmittal Letter and the papers indicated as being transmitted therewith is being deposited with the United States Postal Service on this date 4/22/98 in an envelope as "Express Mail Post Office to Addressee" Mailing Label Number E1640268159US addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Linda M. Leggett

(type/print name of person mailing paper)

(Signature of person mailing paper)

Assistant Commissioner for Patents  
Washington, DC 20231

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

INVENTORSHIP IDENTIFICATION

My residence, post office address and citizenship are stated below next to my name. I believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Hemoglobin Mutants That Reduce Heme Loss

the specification of which was transmitted to the U.S. Patent and Trademark Office by the International Bureau in the Notice mailed on 01 May 1997 (PCT/IB/308) for PCT Application No. PCT/US96/16934 filed on 23 October 1996.

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37, Code of Federal Regulations, § 1.56, and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) listed below, in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information that is material to the examination of this application, namely, information where there is substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent, which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

005060-03945960

## PRIORITY CLAIM

### CLAIM FOR BENEFIT OF EARLIER U.S./PCT APPLICATION(S) UNDER 35 U.S.C. 120

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or PCT international application(s) designating the United States of America that are listed below:

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 USC 120:					
U.S. APPLICATIONS		U.S. FILING DATE (M/D/Y)	PATENTED	PENDING	ABANDONED
60/006,020		23.10.95		...	√
PCT APPL. No.	PCT FILING DATE (M/D/Y)	U.S. SERIAL # (if any)	PATENTED	PENDING	ABANDONED
PCT/US96/16934	23.10.96			√	

## POWER OF ATTORNEY

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Theresa A. Brown, Registration Number 32547

### SEND CORRESPONDENCE TO:

Theresa A. Brown  
Somatogen, Inc.  
2545 Central Avenue  
Suite FD1  
Boulder, CO 80301

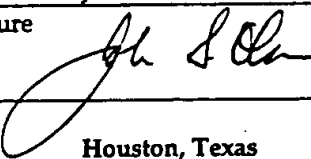
### DIRECT TELEPHONE CALLS TO:


Theresa A. Brown  
(303) 541-3356  
(303) 444-3013 (facsimile)

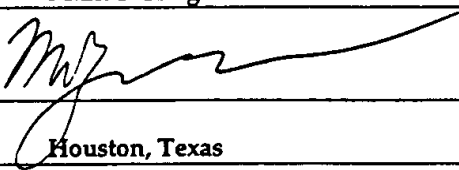
## DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

## SIGNATURES

Full name of sole or first inventor <b>John S. Olson</b>	
Inventor's signature 	Date <b>4/8/98</b>
Residence <b>Houston, Texas</b>	
Citizenship <b>United States</b>	
Post Office Address <b>4407 Lymbar, Houston, Texas 77096-4418</b>	

Full name of second joint inventor <b>Timothy L. Whitaker</b>	
Inventor's signature 	Date <b>4/13/98</b>
Residence <b>San Antonio</b>	
Citizenship <b>United States</b>	
Post Office Address <b>5303 Hamilton Wolf Road, Apartment 720, San Antonio, Texas 78229</b>	

Full name of third joint inventor <b>Mark S. Hargrove</b>	
Inventor's signature 	Date <b>4/8/98</b>
Residence <b>Houston, Texas</b>	
Citizenship <b>United States</b>	
Post Office Address <b>3311 Elmridge Drive, Houston, Texas 77025</b>	

This declaration ends with this page.

0054688-090500

C.C.K. 8/10/00



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

BXTB2024

JULY 19, 2000

PTAS

BAXTER HEALTHCARE CORPORATION  
PAT KOPPELMAN  
25212 WEST STATE ROUTE 120, RLP-30  
ROUND LAKE, ILLINOIS 60073

RECEIVED

JUL 31 2000

FENWAL/PATENT LAW



\*101388338A\*

CORRECTED  
NOTICE



UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 02/22/2000

REEL/FRAME: 010629/0729  
NUMBER OF PAGES: 6

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

OLSON, JOHN S.

DOC DATE: 10/22/1999

ASSIGNOR:

WHITAKER, TIMOTHY L.

DOC DATE: 01/28/2000

ASSIGNOR:

HARGROVE, MARK S.

DOC DATE: 02/04/2000

ASSIGNEE:

WILLIAM MARSH RICE UNIVERSITY /  
6100 MAIN STREET  
HOUSTON, TEXAS 77005

SERIAL NUMBER: 09051872 -  
PATENT NUMBER:

FILING DATE: 04/22/1998 -  
ISSUE DATE:

*[Handwritten signature]*

010629/0729 PAGE 2

DOROTHY RILEY, PARALEGAL  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



101388338

To the Honorable Commissioner of.

Original document(s) or copy thereof.

## 1. Name of conveying party(ies) (assignor(s)):

John S. Olson  
Timothy L. Whitaker  
Mark S. Hargrove

Additional name(s) of conveying party(ies) attached? ☐ yes ☒ no

## 2. Name and Address of Party(ies) receiving an interest (assignee(s)):

Name: William Marsh Rice University  
Address: 6100 Main Street

City: Houston  
State: Texas Zip: 77005  
Country: USA

Additional name(s) & address(es) attached? ☐ yes ☒ no

## 3. Nature of Conveyance:

☒ Assignment ☐ Merger ☐ Change of Name  
☐ Verified Translation ☐ Security Agreement ☐ Other \_\_\_\_\_

Execution Date: 10/22/99; 1/28/00 and 2/4/00

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date(s) of the application is: \_\_\_\_\_

A. Patent Application No(s).

09/051,872

B. Patent No(s).

Others on additional sheet(s) attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Pat Koppelman (docketing)  
Baxter Healthcare Corporation  
25212 West State Route 120, RLP-30  
Round Lake, Illinois 60073

6. Total number of applications and patents involved:  
Application(s) 1 + Patent(s): 0 = Total 17. Total Fee (37 CFR 3.41) ..... \$ 40.00

☒ Enclosed  
☐ Authorized to be charged to deposit account

8. Deposit Account Number: 19-1345

(Duplicate copy of this sheet attached)

☒ Charge any underpayment or credit any overpayment to above Deposit Account

DO NOT USE THIS SPACE

## 9. Statement and signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Kathleen M. Petrillo  
Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments, and document:

6

3/29/2000 DNGUYEN 00000123 03051872

1 TC:581

40.00 DP

SENNIGER, POWERS, LEAVITT & ROEDEL  
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http://www.senniger.com

PATENTS, TRADEMARKS, COPYRIGHTS  
AND RELATED MATTERS

OF COUNSEL  
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RICHARD G. HEYWOOD  
ROBERT J. LEWIS

STUART N. SENNIGER  
(1921-1997)

June 19, 2000

Application of Olson, et al.  
Serial No. 09/051,872  
Filed April 22, 1998  
For HEMOGLOBIN MUTANTS THAT REDUCE HEME LOSS  
Examiner K. Carlson

Art Unit 1653

U.S. Patent and Trademark Office  
Assignment Division  
Box Assignments  
CG-4, 1213 Jefferson Davis Highway  
Suite 320  
Washington, D.C. 20231

Re: Our File BSP1-5319 (BXTB 2024)

Sir:

\* The enclosed copy of the Notice of Recordation of the Assignment document regarding the above-identified application shows the assignor as Mark S. Hargorve incorrectly.

The correct information is:

Mark S. Hargrove

Please send us a corrected copy of the Notice of Recordation.

Sincerely,



Kathleen M. Petrillo

KMP/caa  
\*Enclosure

09/05/00  
09/654688  
U.S. PTO

## ASSIGNMENT

WHEREAS, We John S. Olson of Houston, Texas, Timothy L. Whitaker of San Antonio, Texas and Mark S. Hargrove of Houston, Texas, have invented an improvement in HEMOGLOBIN MUTANTS THAT REDUCE HEME LOSS (File BSP1-5319L (BXTB 2024)) and have executed an application for a United States patent based thereon Serial No. 09/051,872;

AND, WHEREAS, William Marsh Rice University of Houston, Texas, a corporation of the State of Texas (hereinafter referred to as "ASSIGNEE") is desirous of acquiring certain rights thereunder;

NOW, THEREFORE, for one dollar and other good and valuable consideration, receipt of all of which is hereby acknowledged, we have agreed to and do hereby sell, assign and transfer unto said ASSIGNEE the entire right, title and interest in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto in and to said invention, said United States application, any other United States applications (including provisional, non-provisional, divisional, continuing, or reissue applications) based in whole or in part on said United States application or in whole or in part on said invention, any foreign applications based in whole or in part on any of the aforesaid United States application or



in whole or in part on said invention, and any and all patents (including extensions thereof) of any country which have been or may be granted on any of the aforesaid applications or on said invention or any part thereof;

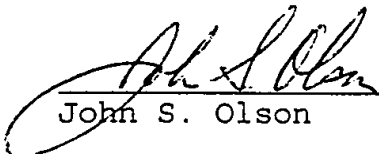
TO BE HELD AND ENJOYED by said ASSIGNEE, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us had no sale and assignment of said interest been made;

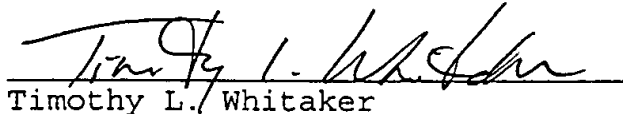
AND We hereby authorize and request the Commissioner of Patents of the United States of America to issue any and all United States patents which may be granted upon said United States applications or any of them, or upon said invention or any part thereof, to said ASSIGNEE;

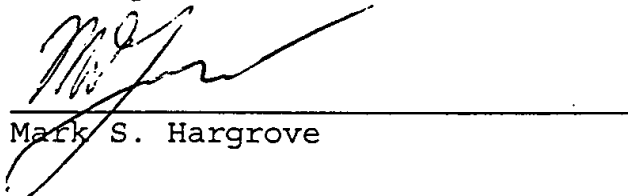
AND We hereby jointly and severally agree for ourselves and for our respective heirs, executors and administrators, to execute without further consideration any further lawful documents and any further assurances, and any provisional, non-provisional, divisional, continuing, reissue, or other applications for patents of any country, that may be deemed necessary by said ASSIGNEE fully to secure to said ASSIGNEE its interest as aforesaid in and to said invention or any part thereof, and in and to said several patents or any of them;

AND We hereby jointly and severally covenant for ourselves and our respective legal representatives that we have granted no right or license to make, use or sell said invention, to anyone except said ASSIGNEE, that prior to the execution of this deed our right, title and interest in said invention had not been otherwise encumbered, and that we have not executed and will not execute any instrument in conflict herewith.

IN WITNESS WHEREOF, we have hereunto set our hands.

  
\_\_\_\_\_  
John S. Olson

  
\_\_\_\_\_  
Timothy L. Whitaker

  
\_\_\_\_\_  
Mark S. Hargrove

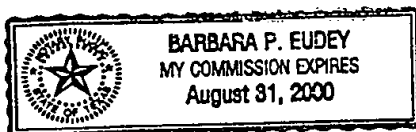
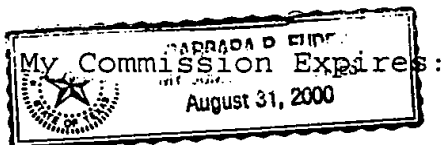
ACKNOWLEDGMENT

STATE OF TEXAS )  
 )  
COUNTY OF HARRIS )

On this 27th day of October, 1999, before me, a Notary Public, personally appeared John S. Olson to me known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

Barbara P. Eudey  
Notary Public



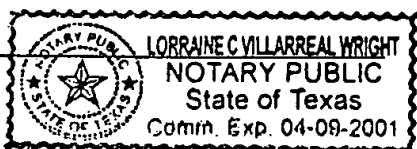
STATE OF Texas )  
 )  
COUNTY OF Bexar )

On this 28 day of January, ~~1999~~ <sup>2000</sup>, before me, a Notary Public, personally appeared Timothy L. Whitaker to me known to be the person described, in and who executed, the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal and the date and year last above written.

Lorraine C. Villarreal Wright  
Notary Public

My Commission Expires:



STATE OF Iowa )  
 )  
COUNTY OF Polk - )

On this 4<sup>th</sup> day of Feb., <sup>2000</sup>~~1999~~, before me, a Notary Public, personally appeared Mark S. Hargrove to me known to be the person described, in and who executed, the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal and the date and year last above written.

Deresa L. Peterson  
Notary Public

My Commission Expires:

June 20, 2000

UC641 U.S. PRO  
09/654688  
09/05/00

**METHOD OF PAYMENT**

- ### FEE CALCULATION

- TOTAL AMOUNT OF PAYMENT \$ 690.00**

9-5-00  
Date

BSP1-5319L CONT(BXTB 3083)  
PATENT



Respectfully submitted,

Kathleen M. Petrillo, Reg No. 35,076  
SENNIGER, POWERS, LEAVITT & ROEDEL  
One Metropolitan Square, 16th Floor  
St. Louis, Missouri 63102  
(314) 231-5400

CERTIFICATE OF MAILING

I hereby certify that the foregoing Preliminary Amendment in the application of Olson, et al. "Hemoglobin Mutants that Reduce Heme Loss," is being deposited with the United States Postal Service as Express Mail #EL069686645US in an envelope addressed to: Assistant Commissioner for Patents, Box Patent Application, Washington, D.C. 20231 on the 5th day of September, 2000.

Carol Aschenbrenner

5319L  
(B. 2024)  
PATENT

#311420  
Rev. Powers  
Attorney

JC841 U.S. PTO  
09/654688  
09/05/00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of Olson, et al.  
Serial No. 09/051,872-664,688  
Filed April 22, 1998  
For HEMOGLOBIN MUTANTS THAT REDUCE HEME LOSS

Art Unit 1646

POWER OF ATTORNEY BY ASSIGNEE OF  
ENTIRE INTEREST AND REVOCATION OF  
PRIOR POWERS AND PERMITS TO INSPECT

TO THE COMMISSIONER OF PATENTS AND TRADEMARKS, .

SIR:

William Marsh Rice University, assignee of the entire right, title and interest in and to the invention of the above application, hereby revokes and cancels all existing powers of attorney in the above-entitled application and appoints C. Steven McDaniel, Reg. No. 33,962 and Elizabeth Hall, Reg. No. 37, 344 of McDaniel & Associates, P.C., located at 710 Colorado, Suite 4H, Austin, Texas 78701, and telephone number 281-414-4922, or their duly appointed associate, attorneys in said application, with full power of substitution, revocation and addition, to prosecute this application, to make alterations and amendments therein, and to transact all business in the Patent and Trademark Office in connection therewith.

Correspondence is to be directed to the firm of Senniger, Powers, Leavitt & Roedel, One Metropolitan Square, 16th Floor, St. Louis, Missouri 63102.

005060-88945960

The undersigned hereby revokes and cancels all existing permits to inspect the official file of the above-entitled application.

Date: 10/8/99

By D.S. Boudreaux

Name: D.S. Boudreaux

Title: Director, Office of Technology Transfer

Date: 10/21/99

John S. Olson

John S. Olson, Inventor

Date: 1/28/00

Timothy L. Whitaker

Timothy L. Whitaker, Inventor

Date: 2/4/00

Mark S. Hargrove

Mark S. Hargrove, Inventor

005060" 88945960